WHAT WE CLAIM IS:

1. A zoom lens system comprising, in order from an object side of said zoom lens system, a first lens group having negative refracting power, a second lens group having positive refracting power, a third lens group having negative refracting power, a fourth lens group having positive refracting power and a fifth lens group having positive refracting power, wherein upon movement of an object point, focusing is carried out with said fifth lens group.

2. A zoom lens system comprising, in order from an object side of said zoom lens system, a first lens group having negative refracting power, a second lens group having positive refracting power, a third lens group having negative refracting power, a fourth lens group having positive refracting power and a fifth lens group having positive refracting power, wherein during zooming from a wide-angle end to a telephoto end of said zoom lens system, a space between said first lens group and said second lens group, and a space between said third lens group and said fourth lens group becomes narrow while a space between said second lens group and said third lens group, and a space between said fourth lens group and an image-formation plane becomes wide, and upon movement of an object point, focusing is carried out with said fifth lens group.

3. A zoom lens system comprising, in order from an object side of said zoom lens system, a first lens group having negative refracting power, a second lens group having positive refracting power, a third lens group having negative

refracting power, a fourth lens group having positive refracting power and a fifth lens group having positive refracting power, wherein:

during zooming from a wide-angle end to a telephoto end of said zoom lens system, a space between said first lens group and said second lens group, and a space between said third lens group and said fourth lens group becomes narrow while a space between said second lens group and said third lens group, and a space between said fourth lens group and an image-formation plane becomes wide,

upon movement of an object point, focusing is carried out with said fifth lens group,

for focusing from a nearby distance direction to an infinite direction, said fifth lens group is moved toward an image side of said zoom lens system, and

for focusing from said infinite direction to said nearby distance direction, said fifth lens group is moved toward said object side.

4. A zoom lens system comprising, in order from an object side of said zoom lens system, a first lens group having negative refracting power, a second lens group having positive refracting power, a third lens group having negative refracting power, a fourth lens group having positive refracting power and a fifth lens group having positive refracting power, wherein during zooming from a wide-angle end to a telephoto end of said zoom lens system, a space between said first lens group and said second lens group, a space between said third lens group and said fourth lens

group, and a space between said third lens group and said fifth lens group becomes narrow while a space between said second lens group and said third lens group, a space between said fourth lens group and an image-formation plane, and a space between said fifth lens group and said image-formation plane becomes wide, and focusing on a subject is carried out by movement of said fifth lens group.

5. A zoom lens system comprising, in order from an object side of said zoom lens system, a first lens group having negative refracting power, a second lens group having positive refracting power, a third lens group having negative refracting power, a fourth lens group having positive refracting power and a fifth lens group having positive refracting power, wherein upon movement of an object point, focusing is carried out with said fifth lens group, and conditions (1), (2) and (3) are satisfied:

$$-0.2 < \beta v < 0.8 \quad \cdots (1)$$

$$0.6 < \Delta L5/\Delta L4 < 1.2 \quad \cdots (2)$$

$$0.05 < D45/f5 < 0.15 \quad \cdots (3)$$

where βv is a magnification of said fifth lens group upon focused on an infinite object point at a wide-angle end of said zoom lens system, $\Delta L4$ is an amount of movement of said fourth lens group from said wide-angle end to a telephoto end of said zoom lens system upon focused on an infinite object point, $\Delta L5$ is an amount of movement of said fifth lens group from said wide-angle end to said telephoto end upon focused on an infinite object point, $D45$ is an air space on an optical axis of said zoom lens system between said fourth lens group

and said fifth lens group upon focused on an infinite object point at said telephoto end, and f_5 is a focal length of said fifth lens group.

6. The zoom lens system according to any one of claims 1 to 5, wherein said fifth lens group comprises one positive lens component having an aspherical surface.

7. The zoom lens system according to any one of claims 1 to 5, wherein said fifth lens group comprises a positive lens component having a shape factor capable of satisfying condition (4):

$$-2 < (R_{51}+R_{52})/(R_{51}-R_{52}) < 0.2 \quad \cdots (4)$$

where R_{51} is a radius of curvature of the surface located nearest to said object side in said fifth lens group, and R_{52} is a radius of curvature of the surface located nearest to said image side in said fifth lens group.

8. A zoom lens system comprising, in order from an object side of said zoom lens system, at least a first lens group having negative refracting power, a second lens group having positive refracting power, a third lens group having negative refracting power and a fourth lens group having positive refracting power, wherein said first lens group comprises, in order from an object side thereof, a positive lens element, a negative meniscus lens element, and a negative lens component comprising a negative lens element and a positive meniscus lens element that are cemented together, and satisfies conditions (5), (6), (7) and (8):

$$-4.0 < f_1/f_W < -1.5 \quad \cdots (5)$$

$$1.55 < n_1 < 1.8 \quad \cdots (6)$$

$$1.3 < R_4/f_W < 3.5 \quad \cdots (7)$$

$$37 < \nu_1 < 83 \quad \cdots (8)$$

where f_1 is a focal length of said first lens group, f_W is a focal length of said zoom lens system at a wide-angle end thereof, n_1 is a refractive index of a medium of said positive lens element located nearest to said object side in said first lens group, R_4 is a radius of curvature of a concave surface of said negative meniscus lens element in said first lens group, and ν_1 is an Abbe number of a medium of said positive lens element located nearest to said object side in said first lens group.

9. A zoom lens system comprising, in order from an object side of the zoom lens system, at least a first lens group having negative refracting power, a second lens group having positive refracting power, a third lens group having negative refracting power and a fourth lens group having positive refracting power, wherein said first lens group comprises, in order from an object side thereof, a positive lens element, a negative meniscus lens element, a negative lens element and a positive meniscus lens element, and satisfies conditions (9) to (13):

$$0.5 < D_6/f_W < 1.2 \quad \cdots (9)$$

$$-4.0 < f_1/f_W < -1.5 \quad \cdots (10)$$

$$1.55 < n_1 < 1.8 \quad \cdots (11)$$

$$1.3 < R_4/f_W < 3.5 \quad \cdots (12)$$

$$37 < \nu_1 < 83 \quad \cdots (13)$$

where D_6 is a space between said negative lens element and said positive meniscus lens element in said first lens group,

f_1 is a focal length of said first lens group, f_w is a focal length of said zoom lens system at a wide-angle end thereon upon focused on an infinite object point, n_1 is a refractive index of a medium of said positive lens element located nearest to said object side in said first lens group, R_4 is a radius of curvature of a concave surface of said negative meniscus lens element in said first lens group, and ν_1 is an Abbe number of a medium of said positive lens element located nearest to said object side in said first lens group.

10. A zoom lens system comprising, in order from an object side of the zoom lens system, at least a first lens group having negative refracting power, a second lens group having positive refracting power, a third lens group having negative refracting power and a fourth lens group having positive refracting power, wherein said first lens group comprises, in order from an object side thereof, a negative meniscus lens element, a negative lens element, and a positive meniscus lens component consisting of a positive lens element and a negative lens element that are cemented together, and satisfies conditions (14) and (15):

$$-4.0 < f_1/f_w < -1.5 \quad \cdots (14)$$

$$1.3 < R_2/f_w < 3.5 \quad \cdots (15)$$

where f_1 is a focal length of said first lens group, f_w is a focal length of said zoom lens system at a wide-angle end thereof upon focused on an infinite object point, and R_2 is a radius of curvature of a concave surface of said negative meniscus lens element in said first lens group.

11. A zoom lens system comprising, in order from an object side of the zoom lens system, at least a first lens group having negative refracting power, a second lens group having positive refracting power, a third lens group having negative refracting power and a fourth lens group having positive refracting power, wherein said first lens group comprises, in order from an object side thereof, a negative meniscus lens element, a negative lens element, and a positive meniscus lens component consisting of a positive lens element and a negative lens element that are cemented together, further comprises at least one aspherical surface, and satisfies conditions (14) and (15):

$$-4.0 < f_1/f_W < -1.5 \quad \cdots (14)$$

$$1.3 < R_2/f_W < 3.5 \quad \cdots (15)$$

where f_1 is a focal length of said first lens group, f_W is a focal length of said zoom lens system at a wide-angle end thereof upon focused on an infinite object point, and R_2 is a radius of curvature of a concave surface of said negative meniscus lens element in said first lens group.

12. The zoom lens system according to any one of claims 1 to 5 and claims 8 to 11, which further satisfies condition (16):

$$0.15 < Hb_{1abs}/f_{1abs} < 0.9 \quad \cdots (16)$$

where f_{1abs} is an absolute value of said focal length of said first lens group, and Hb_{1abs} is an absolute value of a rear principal point position of said first lens group.

13. The zoom lens system according to any one of claims 1 to 5 and claims 8 to 11, which further satisfies condition (17):

$$0.7 \times 10^{-2} \text{ mm} < Hb_{1abs}/(f_{1abs} \cdot f_2) < 6 \times 10^{-2} \text{ mm} \quad \cdots (17)$$

where f_{1abs} is an absolute value of said focal length of said first lens group, Hb_{1abs} is an absolute value of a rear principal point position of said first lens group, and f_2 is a focal length of said second lens group.

14. The zoom lens system according to any one of claims 1 to 5 and claims 8 to 11, wherein said third lens group comprises two lens component, i.e., a cemented concave lens component and a negative single lens component, and which further satisfies condition (18):

$$0.1 < f_{31}/f_{32} < 1 \quad \cdots (18)$$

where f_{31} is a focal length of said cemented concave lens component in said third lens group, and f_{32} is a focal length of said negative single lens component in said third lens group.

15. The zoom lens system according to any one of claims 1 to 5 and claims 8 to 11, which futher satifies at least two of conditions (16), (17) and (18):

$$0.15 < Hb_{1abs}/f_{1abs} < 0.9 \quad \cdots (16)$$

$$0.7 \times 10^{-2} \text{ mm} < Hb_{1abs}/(f_{1abs} \cdot f_2) < 6 \times 10^{-2} \text{ mm} \quad \cdots (17)$$

$$0.1 < f_{31}/f_{32} < 1 \quad \cdots (18)$$

where f_{1abs} is an absolute value of said focal length of said first lens group, Hb_{1abs} is an absolute value of a rear principal point position of said first lens group, f_2 is a focal length of said second lens group, f_{31} is a focal length

of said cemented concave lens component in said third lens group, and f_{32} is a focal length of said negative single lens component in said third lens group.

16. The zoom lens system according to any one of claims 1 to 5 and claims 8 to 11, wherein during zooming from said wide-angle end to said telephoto end, said first lens group moves closer toward said image side at said telephoto end than at said wide-angle end, said second lens group and said fourth lens group move constantly toward said object side, and said third lens group remains fixed.

17. The zoom lens system according to claim 16, wherein said second lens group and said fourth lens group move together.

18. The zoom lens system according to any one of claims 1 to 5 and claims 8 to 11, which further comprises an aperture stop that moves together with said second lens group.

19. The zoom lens system according to any one of claims 1 to 5 and claims 8 to 11, which further comprises an aperture stop that is fixed in the vicinity of said third lens group.

20. An image pickup system which uses a zoom lens system as recited in any one of claims 1 to 5 and claims 8 to 11 as an image pickup objective optical system, and wherein an image pickup device is located on an image side of said zoom lens system.